

REMARKS

Claims 3, 4 and 6-15, 17 and 19 are pending in the present application. The Office Action is Final. Claims 3 and 4 have been amended to include subject matter taken from claims 16 and 18, respectively. No new matter has been added by way of the amendments.

In view of the following remarks, the Examiner is respectfully requested to withdraw all rejections and allow the currently pending claims.

Issues Under 35 U.S.C. § 103

Claims 3-4 and 6-19 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Japanese Patent Specification No. JP 2001-233661 A in view of Lin (U.S. Patent No. 5,518,980 A, hereinafter referred to as Lin).

Claims 3-4 and 6-19 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Kikuchi et al. (U.S. Patent No. 4,650,523 A, hereinafter referred to as Kikuchi) in view of Lin.

Claims 3-4 and 6-19 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Simeonov et al. (U.S. Patent No. 4,205,998 A, hereinafter referred to as Simeonov) in view of Lin.

Each of the above rejections is respectfully traversed.

Unexpected and Superior Results Have Been Demonstrated

Applicants respectfully submit that unexpected and superior results have been demonstrated with respect to the present invention as compared to the prior art. Further, although Applicants maintain that these results are fully commensurate with a cement composition comprising 100 parts by weight of a cement and 0.05 to 10 parts by weight of calcium hydroxide particles having an average particle diameter of 3 μ m or less as a cement setting accelerator for shortening the initial and final setting times of said cement composition, Applicants have nonetheless amended the claims to require calcium hydroxide particles having an average particle diameter of 2.5 μ m or less.

Referring to the Declarative evidence of record, the Examiner is requested to again review the latest Declaration submitted on December 11, 2008.¹ The December 11, 2008 Declaration test clearly shows superior (shorter) initial setting and final setting times for calcium hydroxide particles having an average particle diameter of 2.5 μm or less. Thus, although the exact transition point of the earlier claimed "3 μm or less" has not been illustrated, certainly there exists sufficient test data for the now claimed narrower range of "2.5 μm or less."

Additionally, an even narrower range of "2 μm or less," "1.3 μm or less" and "1 μm or less" are presented in claims 7, 8, 11, 12, 17 and 19.

As such, Applicants submit that the Comparative testing already of record supports a conclusion of unexpectedly superior results for the claimed invention as compared to the prior art. Thus, the above rejections are moot.

There Exists No Prima Facie Case of Obviousness

There exists no reason to modify any of the primary references (JP '661, Kikuchi '523 and Simeonov '998) with the secondary disclosure of Lin '980.

JP '661 discloses a dry cement concrete including a hydroxide, such as calcium hydroxide, in an amount of 0.3 – 1% mass per 100% mass of cement. However, JP '661 fails to disclose the particle diameter of the calcium hydroxide in use.

Kikuchi '523 teaches a cement accelerating element comprising calcined alunite, a carbonate and lime. However, Kikuchi '523 fails to disclose or suggest the particle size of the lime.

Simeonov '998 discloses a cement accelerating agent comprising calcium oxide in the form of hydrated lime. The mixture is added to a cement composition. However, similar to the above two references of JP '661 and Kikuchi '523, Simeonov '998 fails to disclose or suggest the particle size of the calcium hydroxide.

The Examiner attempts to cure these deficiencies with the disclosure of Lin '980. As will be seen below, this is incorrect.

¹ The December 11, 2008 Declaration provides new inventive and comparative test data as well as all data already presented in the Declaration submitted on July 9, 2008. It is thus sufficient to consult only the December 11, 2008 Declaration.

Lin '980 teaches a calcium hydroxide slurry having an average primary particle size of about 0.05 to about 5.0 μm (see column 5, lines 39-14). However, the calcium hydroxide is used as a sulfur oxide (SOx)-reducing agent in the composition of Lin '980 (see column 4, lines 59-61). Lin '980 fails to disclose that calcium hydroxide having an average particle size of about 0.05 to about 5.0 μm should or could serve as a cement setting accelerator. Lin '980 further fails to recognize that any superior results might be achieved by utilization of a particle size of 2.5 μm or less.

Applicants stress that one of skill in the art would never have even consulted the disclosure of Lin '980, much less applied the teachings of Lin '980 to any of the primary references with a reasonable expectation of success. For at least this reason, Applicants strongly urge the Examiner to recognize that there exists no *prima facie* case of obviousness.

At best Applicants submit that the Examiner's rejection amounts to an "obvious to try" standard. As will be seen below, Applicants submit that the Examiner has improperly set forth one or both of the two classes or erroneous "obvious to try" rejections.

The issue of "obvious to try" was recently revisited by the Federal Circuit in In re Kubin (2008-1184, decided April 3, 2009). The court in Kubin highlighted an earlier decision of In re O'Farrell, 853 F.2d 894 (Fed. Cir. 1988), where it was cautioned that "obvious to try" is an incantation whose meaning is often misunderstood:

It is true that this court and its predecessors have repeatedly emphasized that "obvious to try" is not the standard under § 103. However, the meaning of this maxim is sometimes lost. Any invention that would in fact have been obvious under § 103 would also have been, in a sense, obvious to try. The question is: when is an invention that was obvious to try nevertheless nonobvious?

In re O'Farrell, 853 F.2d 894, 903 (Fed. Cir. 1988).

The Federal Circuit held in In re Kubin that to differentiate between proper and improper applications of "obvious to try," it is necessary to understand two classes of situations where "obvious to try" is erroneously equated with obviousness under § 103. In the first class of cases,

what would have been "obvious to try" would have been to vary all parameters or try each of numerous possible choices until one possibly arrived at a successful result, where the prior art gave either no indication of which parameters were critical or no direction as to which of many possible choices is likely to be successful.

Id. In such circumstances, where a defendant merely throws metaphorical darts at a board filled with combinatorial prior art possibilities, courts should not succumb to hindsight claims of obviousness. The inverse of this proposition is succinctly encapsulated by the Supreme Court's statement in KSR that where a skilled artisan merely pursues "known options" from a "finite number of identified, predictable solutions," obviousness under § 103 arises. 550 U.S. at 421.

The second class of O'Farrell's impermissible "obvious to try" situations occurs where what was "obvious to try" was to explore a new technology or general approach that seemed to be a promising field of experimentation, where the prior art gave only general guidance as to the particular form of the claimed invention or how to achieve it.

853 F.2d at 903. Again, KSR affirmed the logical inverse of this statement by stating that § 103 bars patentability unless "the improvement is more than the predictable use of prior art elements according to their established functions." 550 U.S. at 417.

In the present instance, none of the references of JP '661, Kikuchi '523 or Simeonov '998 ever discuss a particular particle size for calcium hydroxide particles. Thus, the Examiner cites to the Lin '980 reference in order to supply such particle size teaching. However, in the composition of Lin '980 the calcium hydroxide is used as a sulfur oxide (SOx)-reducing agent in (see column 4, lines 59-61). Lin '980 fails to disclose that the calcium hydroxide should or could serve as a cement setting accelerator.

Therefore, the only way for one of skill in the art to combine the teachings of Lin '980 with that of the primary references would be to explore a new technology or general approach, for example, a cement setting accelerator. This certainly falls within the "second" erroneous "obvious to try" class of rejection discussed above. In fact, the Examiner's rationale for combining Lin '980 with the primary references at least amounts to the throwing of metaphorical darts at a board filled with combinatorial prior art possibilities. This is the "first" erroneous "obvious to try" class of rejection discussed above.

As such, Applicants submit that the outstanding rejection is improper and must be withdrawn.


In view of the above, Applicants respectfully submit that the present claims are in condition for allowance. The Examiner is thus requested to withdraw all rejections and allow the currently pending claims.

If the Examiner has any questions or comments, please contact Craig A. McRobbie, Reg. No. 42,874, at the offices of Birch, Stewart, Kolasch & Birch, LLP at the number provided below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to our Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. § 1.16 or under § 1.17; particularly, extension of time fees.

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Respectfully submitted,

By 

Craig A. McRobbie
Registration No.: 42,874
BIRCH, STEWART, KOLASCH & BIRCH, LLP
8110 Gatehouse Road
Suite 100 East
P.O. Box 747
Falls Church, Virginia 22040-0747
(703) 205-8000
Attorney for Applicants